Geographic response strategies: Part One – Introduction

Purpose and Scope

These Geographic Response Strategies (GRS) are designed to be a supplement to the Kodiak Subarea Contingency Plan for Oil and Hazardous Substances Spills and Releases, commonly referred to as the Kodiak Subarea Contingency Plan (SCP). GRS provide unified (public, responders, and agencies) priorities and response strategies for the protection of selected sensitive areas to aid first responders to an oil spill. The GRS list the sensitive resources of an area and the response strategies, equipment, personnel and logistical information necessary to protect the sensitive areas. Because the U.S. Coast Guard Marine Safety Office, Environmental Protection Agency and the Alaska Department of Environmental Conservation have already approved them, the GRS serve as pre-approved strategies of the Unified Command during the emergency phase of an oil spill response.

Implementation of these Geographic Response Strategies is the third phase of an oil spill response. The first and primary phase of the response is to contain and remove the oil at the scene of the spill or while it is still on the open water, thereby reducing or eliminating impact on shorelines or sensitive habitats. If some of the spilled oil escapes this tactic, the second phase, which is no less important, is to intercept, contain and remove the oil in the nearshore area. The intent of phase two is the same as phase one: remove the spilled oil before it impacts sensitive environments. If phases one and two are not fully successful, phase three is to protect sensitive areas in the path of the oil. The purpose of phase three is to protect the selected sensitive areas from the impacts of a spill or to minimize that impact to the maximum extent practical.

The sites selected for development of Geographic Response Strategies are not meant to be exclusive; other sensitive sites may require protection during any given oil spill. The fact that a GRS may not have been developed for a certain sensitive site does not mean that site should not be protected if it is threatened by an oil spill.

These strategies are intended to be flexible to allow spill responders to modify them, as necessary, to fit the prevailing conditions at the time of a spill. Seasonal constraints, such as ice or weather, may preclude implementation of some of the strategies in the winter months. It is not intended that all the sites be automatically protected at the beginning of a spill, only those that are in the projected path of the spill. The strategies developed for the selected sites were completed with a focus on minimizing environmental damage, utilizing as small a footprint as needed to support the response operations and selecting sites for equipment deployment that will not cause more damage than the spilled oil. To test these GRS, each site will be visited and equipment deployed according to the strategy, to ensure that the strategy is the most effective in protecting the resources at risk at the site. Revisions will be made to the strategies, and this document, if changes are indicated by site visits, drills or actual use during spills.

The July 1998 publication of the Kodiak SCP included Geographic Response Plans (GRP), precursors to GRS, for two sites: the Kitoi Bay salmon hatchery and the Buskin River. The SCP listed eight additional sites that were slated for future GRP development. In October of 2001, 21 GRS were developed throughout the Kodiak Subarea, including the two original GRP sites and eight priority sites identified in 1998 (see figures G-1-2 and G-1-3). Subsequently, the Kodiak GRS Workgroup has divided the Subarea into five Geographic Response Zones (figure G-1-1) and directed that 26 additional sites be developed in the Western and Northern Zones (see figures G-1-2 and G-1-3). As of December 2005, 47 strategies have been developed for the entire Subarea. In the future, strategies may be developed for the remaining sensitive areas.

How to Use These Geographic Response Strategies

The information provided here supplements information provided in the Kodiak SCP and the Alaska Federal/State Preparedness Plan for Response to Oil & Hazardous Substances Discharge/Releases (commonly referred to as the Unified Plan). Information provided in either of those plans is not duplicated herein. This document is intended for use by response professionals already familiar with spill response techniques.

Part 2 contains a general description of the protection/recovery strategies utilized throughout the GRS and directs responders to more detailed information. Each description contains the strategy objective, deployment depictions, resource sets required to implement the strategy, and deployment considerations and limitations. These general strategies may be adapted to produce a protection scheme for any site in Kodiak.

Figure G-1-1. Cook Inlet Geographic Response Zones

Part 3 contains site-specific response strategies. An index at the beginning of each sub-section shows the location of the selected sites. Each GRS consists of two parts: 1) a graphic showing a map, deployment diagram, picture and implementation notes; and 2) a matrix giving the location description, response strategy, response resources, staging area, site access, natural resources being protected and special considerations. Because the first round of 21 GRS were completed before Alaska adopted a standardized GRS template, they vary somewhat in style and content from more recently developed sites.

Who to Contact for Input

Comments and recommendations on these GRS are welcomed. Please send your comments to either of the following agencies:

Alaska Department of Environmental Conservation
Prevention and Emergency Response Program
555 Cordova Street
Anchorage, AK 99501

United States Coast Guard
Captain of the Port, Western Alaska
510 L Street
Anchorage, AK 99501

How the Document Was Developed

These GRS were developed through a cooperative, work group process involving federal, state, and local spill response experts working with representatives from the oil production and transportation industry, citizens' groups, and natural resource agencies. Work groups were (or will be) formed for each response zone in the subarea.

Work group participants identified all sensitive areas with potential to be classified as "Areas of Major Concern" under the criteria established in the Kodiak Subarea Plan. These potential sites were evaluated by the additional criteria of 1) risk of being impacted from a water borne spill; and 2) feasibility of successfully protecting the site with existing technology. Using this process, the work group selected a preliminary list of sites that was released for public input. Feedback on site selection was solicited from tribal representatives, user groups, environmental organizations and the general public. Based on the feedback received, the work group made the final site selections for the zone. Additional sites may be selected in the future.

A Kodiak Tactics committee, composed of spill response professionals and personnel from natural resource agencies, was formed to develop draft strategies for each site selected. The draft strategies were reviewed and approved by the entire work group and the final draft was forwarded to the Kodiak Subarea Committee with the recommendation that it be adopted as part of the Kodiak SCP.

The Kodiak Workgroup consisted of representatives from the following organizations:

*Alaska Department of Environmental Conservation
Alaska Department of Fish and Game
Alaska Department of Natural Resources
Alaska Chadux Corporation
Alaska Tanker Company
Alyeska Pipeline Service Company
BP Exploration Alaska
ChevronTexaco Shipping
Cook Inlet Regional Citizens Advisory Council
Cook Inlet Spill Prevention and Response, Inc.
Crowley Marine Services
Kodiak Area Native Association
Kodiak Island Borough
The City of Kodiak
Minerals Management Service
National Marine Fisheries Service
National Oceanic and Atmospheric Administration
National Park Service
Ocean Shipping, Inc.
Phillips Petroleum
Polar Tanker Company
Prince William Sound Regional Citizens Advisory Council
SeaRiver Maritime
*Tesoro Alaska Petroleum
United States Coast Guard
United States Department of the Interior
United States Fish and Wildlife Service
Unocal
Williams Alaska Petroleum
* = co-chairs

The work group developed Table G-1-1 to aid in the selection of sites from within the Kodiak Subarea. The table consists of identified sites in each row with information about resources at each site that could qualify the site as an area of major concern detailed in the columns.

GREEN: GRS is final and adopted into Subarea Contingency Plan.
YELLOW: GRS is approved by Workgroup but not yet adopted into Subarea Contingency Plan.
RED: Site is selected for GRS development, GRS is in draft form for review by Workgroup members.

January 15, 2006

WESTERN ZONE
Kodiak Subarea, Alaska
SELECTED SITES for GEOGRAPHIC RESPONSE STRATEGIES

K-22 – Halibut Bay-Southern end
K-23 – Harvester Island
K-24 – Larsen Bay
K-25 – Zachar Bay
K-26 – Spiridon Bay-Upper Bay Islands
K-27 – Chief Cove
K-28 – Campbell Lagoon
K-29 – Village Islands
K-30 – Noisy Islands
K-31 – Uganik Passage-Bays
K-32 – Terror Bay
K-33 – Uganik East Passage
K-34 – Viekoda Bay
K-35 – Dry Spruce Bay

SITES with COMPLETED GRS K#
K-10 – Sturgeon River
K-11 – Tanglefoot Bay//Karluk
K-13 – Browns Lagoon

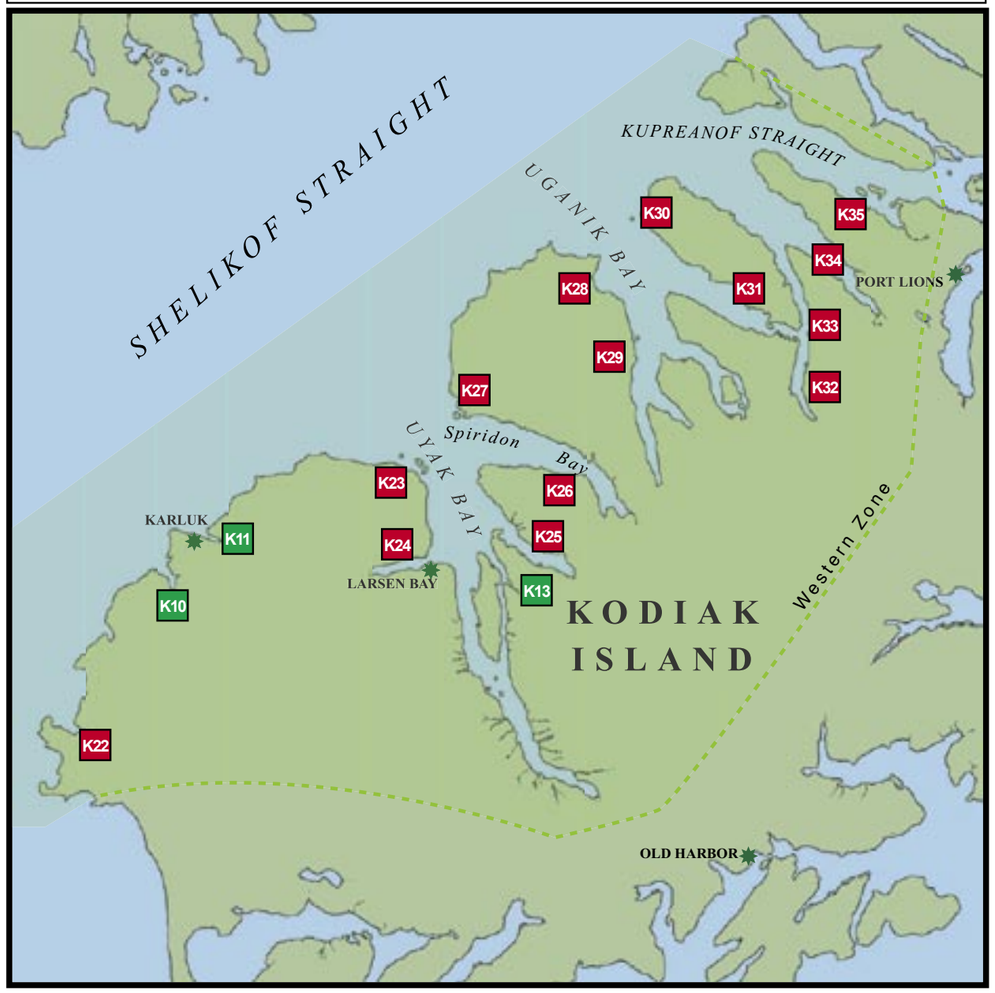

Figure G-1-2. Western Kodiak Geographic Response Strategies.

GREEN: GRS is final and adopted into Subarea Contingency Plan.
YELLOW: GRS is approved by Workgroup but not yet adopted into Subarea Contingency Plan.
RED: Site is selected for GRS development, GRS is in draft form for review by Workgroup members.

January 15, 2006

NORTHERN ZONE
Kodiak Subarea, Alaska
SELECTED SITES for GEOGRAPHIC RESPONSE STRATEGIES

K-36 – Selief Bay
K-37 – Muskomee Bay
K-38 – Paramanof Bay
K-39 – Foul Bay
K-40 – Blue Fox Bay
K-41 – Big Bay
K-42 – Carry Inlet-North
K-43 – Carry Inlet-South
K-44 – Shangin Bay
K-45 – Andreon Bay/Big Fort Island
K-46 – Pauls Bay
K-47 – Seal Bay

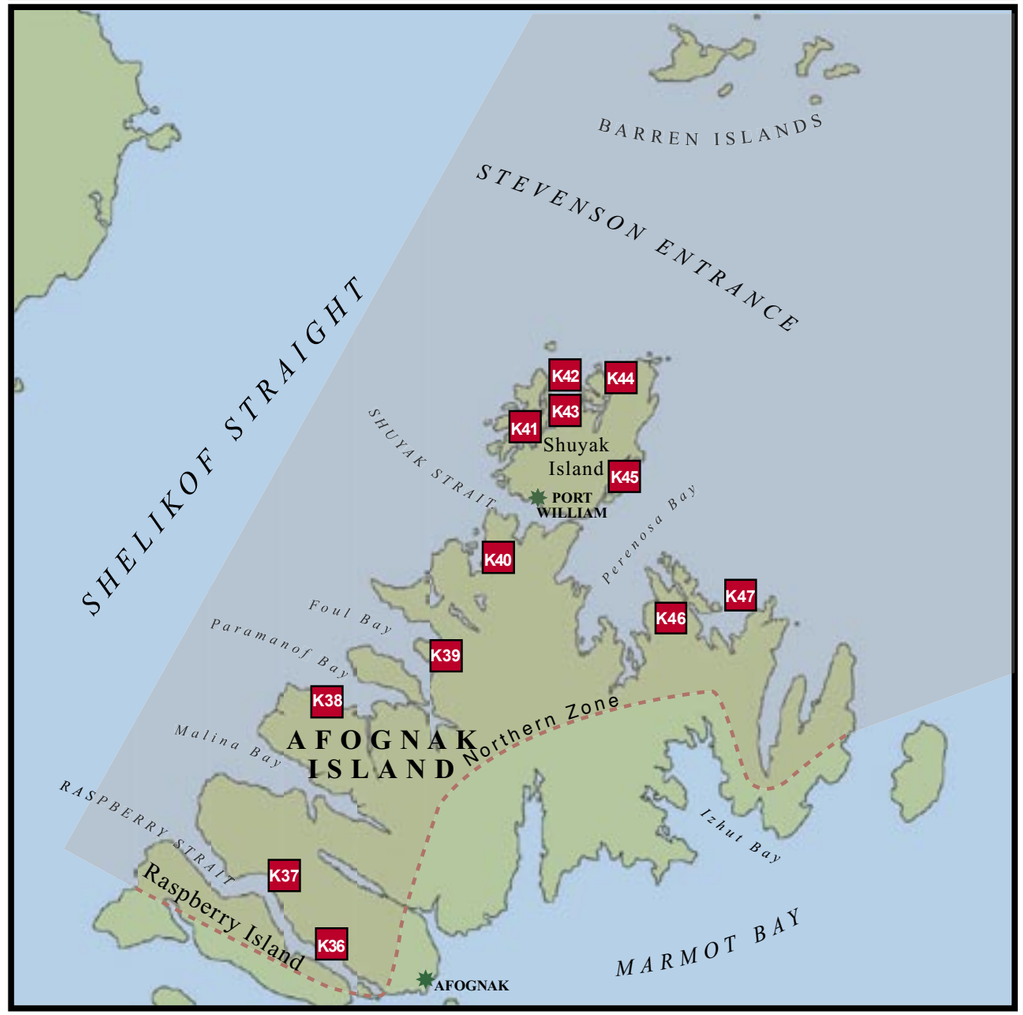

Figure G-1-3. Northern Kodiak Geographic Response Strategies.

Key to Site Selection Matrix Table G-1-1.

Resource	Marine Mammals	Fish	Terrestrial Mammals	Subsistence	Cultural Resources	Birds	High Recreational Use	Commercial Fishing	Land Mgt. Designations	Coastal Habitat
Key to Site Selection Matrix	O = otter	K = King salmon	B= Bears-High Abundance	F = Freshwater fish	R = REPORT any cultural resources found during operations to FOSC Historic Properties Specialist.	En = Eagle nest	SF = Sports Fishing SF+ = High use	C = Commercial fishing	TL = Tidelands leases, permits, & right-of-ways	M = Marsh
	S = Harbor Seal	P = Pink salmon	D = Deer	S = Salmon	I = FOSC Historic properties specialist should INSPECT site prior to operations.	SBf = Seabird feeding area	C = Campsite	A = Aquaculture sites	CT = Conveyed Tidal Lands	SRS = Sheltered Rocky Shoreline
	SL = Sea Lion	Co = Coho Salmon		I = Invertebrates	M = FOSC Historic properties specialist should MONITOR operations.	SBn = Seabird nesting area	TH = Trailhead	H = Hatchery	SP = State Park	K = High Density Kelp Bed
	SLR= Sea Lion Rookery	Ch = Chum Salmon		M = Marine Mammals		WFc = Waterfowl concentration area	K = Kayak beach	HC = High Use Commercial Fishery	BO = Kodiak Borough	ETF = Exposed Tidal Flat
		DV = Dolly Varden Char		O = Otters		WFs = Waterfowl or Shorebird Spring Onshore	A = Anchorage		CH = Critical Habitat	STF = Sheltered Tidal Flat
		I = Intertidal Spawning		C=Crabs		SHBc= Shorebird concentration area			KNWR = Kodiak National Wildlife Refuge	GB = Gravel Beach
		H = Herring Spawning		B = birds					N = Native owned	EWP = Exposed Wavecut Platform
		S = Sockeye Salmon							State = State owned	
		SH= Steelhead trout							P = Private owned	
		+ = Population of MODERATE concern							MR = Maritime Wildlife Refuge	
		++ = Population of MAJOR concern							BLM = Bureau of Land Mngt.	
									SGS = State Game Sanctuary	
Responsible Agency	NMFS, ADFG, USFWS	ADFG		ADFG	ADNR	USFWS, ADFG	ADNR	ADFG	ADNR, NPS, ADFG, Municipalities, Tribal Organizations	NOAA

Table G-1-1. Site selection table for the Kodiak Geographic Response Zone.

Seletion #	GRS #	Site Name	Lat. N	Lon. W	Marine Mammals	Fish	Terrestrial Mammals	Intertidal	Subsistence	Cultural Resources	Birds	High Recreational Use	Commercial Fishing	Land Mgt. Designations	Coastal Habitat
NORTHERN ZONE															
AFOGNAK ISLAND															
1		Sealion Rocks	58 20.5	151 48.9	SL,S,O						SBn				ERS
2		Tonki Bay	58 20.2	152 03.5	SL,S,O	Co, P+, CH, DV,H++	B		I		En, SBn		CF	Af St Park	SRS,GB,EWP
3	K-47	Seal Bay/Duck Cape	58 23.4	152 11.4	S,O	S, Co, P, SH, DV, H++	B		I	Inspect	En, WFc,SBn	SF+	CF	Af St Park	STF,SRS
4		Pheonix Bay	58 25.2	152 20.2	S,O	H					En, SBn, WFc			Af St Park	STF,SRS
5	K-46	Pauls Bay	58 23.7	152 21.2	S,O	P, DV, Co, H++	B			Inspect	En, SBn, WFc		CF	Af St Park	STF,SRS
6		Discoverer Bay/Head of	58 20.9	152 23.9	S,O	P, DV, Co, H++	B		S,I		En, SBn, WFc		CF	Af St Park	SRS,GB
7		Delphin Bay	58 22.5	152 28.1	S,O	Co, P, DV			I		En, SBn, WFc		CF	Native/AMNWR	SRS
8		Little/Big Waterfall Bays	58 25.1	152 29.2	S,O	Co, P+, DV, CH	B		I		En, SBn, WFc		CF	Native/AMNWR	SRS
9		Red Fox Bay & Nearby Bay	58 23.3	152 34.6	O	Co, P, DV, H++			I		En, SBn, WFc		CF	Native/St/AMNWR	STF,SRS,GB
10	K-40	Blue Fox Bay	58 28.2	152 42.2	O	Co, H++, P+	B		I		En, SBn, WFc		CF	KNWR	STF,SRS,GB
11		Devil Inlet	58 25.6	152 49.8	SL,S,O	P,H++	B		I		En, SBn, WFc		CF	KNWR	ERS,GB
12	K-39	Foul Bay/ NE Bays-E. Bann Isl.	58 21.2	152 49.1	S,O	P, Co+, CH, H++	B		I, S	Inspect	En, SBn, WFc		CF	KNWR	STF,SRS,GB
13	K-38	Paramanof Bay	58 17.3	152 53.8	SL,S,O	Co+, S, P+, SH, DV,H++			I, S	Inspect	SBn	SF+	CF	Native/St/AMNWR	STF,SRS,ETF,GB
14		Malina Bay	58 14.1	153 08.2	SL,O	S, CO, P, DV, H++			I		En, SBn		CF	Native/St/AMNWR	STF,SRS,GB, ERS
15		Malina Creek	58 10.4	153 13.7	S,O	S, Co, P, DV, SH			I, S, F		En, SBn	SF+	CF	Native/St/AMNWR	ERD,GB
16	K-37	Dolphin Pt./Muskomee Bay	58 06.2	153 06.2	SL,S,O	P, Co, DV, H++	B		I, S	Inspect	En, SBn, WFc		CF	Native/St/AMNWR	SRS,GB
17	K-36	Selief/Yukuk Bays	58 02.1	153 00.1	S,O	Co, P, DV, H++	B		I, S		En, WFc	SF+	CF	Native/St/AMNWR	SRS,GB
18		Onion Bay	58 02.5	153 13.9	O	Co, P, H++	B		I, C, S		En, WFc		CF	State	M,SRS
19		Little Raspberry Island/The Slough	57 58.6	152 52.4	S,O	H++			I, C,S		En,WFc		CF	Native/ St	SRS,STF,EWP
Shuyak Island															
20	K-45	Andreon Bay/Big Fort Island	58 30.1	152 23.9	S,O	Co, P			I	Inspect	En, WFc			State	SRS,ERS
21		Sea Otter Island	58 30.9	152 13.2	SL,S,O						SBn			State	ERS
22		East Shuyak Island Stream	58 35.3	152 21.3	S,O	S, Co, P, DV			I		En, SBn, WFc		CF	State	ERS
23		Point Banks	58 38.5	152 22.2	O				I		En, SBn, WFc			State	SRS,ERS
24	K-44	Shangin Bay	58 36.9	152 25.3	S,O	Co, P, H++	B			Report	En, SBn, WFc		CF	SH St Park	SRS,STF
25	K-42	Carry Inlet-North	58 36.4	152 30.7	S,O	H++			I	Report	En, SBn, WFc		CF	SH St Park	M,SRS,STF,GB
25	K-43	Carry Inlet-South	58 34.4	152 32.2	S,O	Co, P, S, H++	B		I	Inspect	En, SBn, WFc		CF	SH St Park	M,SRS,STF,GB
26		Western Inlet	58 35.2	152 39.2	S,O	Co, P, DV, S, H++			I		En, SBn, WFc	SF	CF	SH St Park	M,SRS,STF,GB
27	K-41	Big Bay	58 33.4	152 37.3	S,O	Co, P, DV, H++	B		I	Inspect	En, SBn, WFc	SF	CF	SH St Park	M,SRS,STF,GB
28		Neketa Bay	58 31.4	152 38.8	S, O						En, SBn, WFc			SH St Park	SRS,STF
29		Cape Newland	58 30.1	152 39.5	S,O				I		En, SBn, WFc		CF	SH St Park	ERS,GB,STF
30		Port William/Daylight Harbor	58 29.1	152 35.1	O				I		En, SBn, WFc		CF	State	ERS,GB
31		Latax Rocks	58 40.7	152 30.4	S						SBn, WFc		CF	State	ERS
Barren Islands															
32		Sud Island	58 53.5	152 12.1	SL,S						SBn			KNWR	ERS,SRS,EWP,GB
33		Nord Island	58 58.1	152 08.5										KNWR	ERS
34		West Ushagat Island	58 56.5	152 21.3	SL									KNWR	ERS,GB
35		Sugarloaf Island	58 53.2	152 01.1	SL						SBn			KNWR	ERS

Table G-1-1 continued. Site selection table for the Kodiak Geographic Response Zone .

36		West Amatuli Island	58 56.1	151 59.9	SL,S						SBn			KNWR	ERS
Western Zone															
37		Gurney/Middle Bay	57 18.8	154 47.6	S,SL			C	I		En, SBn		CF	KNWR	GB,ERS,EWP
38	K-22	Halibut Bay-Southern end	57 22.5	154 44.6	S	Co,P+,CH+,DV,I		C	I	Report	En,WFc		CF	Native	SRS,STF,M,GB
39		Grant Lagoon	57 27.7	154 40.1	S	P++,CH,DV,I	B	C	I, C, F		En,WFc	SF+	CF	Private	SRS,STF,M
40	K-10	Sturgeon River	57 32.8	154 32.6		Co++,P++,CH+,DV,SH,H,I		C	I,C,S,F		En,WFc	SF+	CF	KNWR	SRS,STF,M,GB
41	K-11	Tanglefoot Bay//Karluk	57 34.6	154 27.6		S++, P++, Co+, CH, K, SH, DV	B		I,C,F,S		En,WFc	SF+	CF	Private	SRS,STF,M
42	K-23	Harvester Island	57 39.1	154 00.6	O	P, H++		C	I	Inspect	En, SBn,WFc		CF	KNWR	SRS,STF,GB
43	K-12/K-24	Larsen Bay	57 36.0	153 55.3	O	P, CH, H++		C	I,C,S,F		En,WFc	SF+	CF	KNWR	SRS,STF,M,GB
44		Lower Uyak Bay	57 25.1	153 50.0	S, O	P++, Co+, CH+, H++			I,C,S,F		En, SBn,WFc	SF+	CF	KNWR	SRS,STF,M
45	K-13	Browns Lagoon	57 30.9	153 48.6	S,O	P,Co,CH,H			I,C,S,F		En	SF+		KNWR,Private,Native	SRS
46	K-25	Zacher Bay	57 32.8	153 44.9	S, O	P,Co,CH,H					En			KNWR,Private,Native	STF,SRS,M,ETF
47	K-26	Spiridon Bay-Upper Bay Islands	57 38.9	153 41.7	S, O	P+, Co+, CH, DV, H++			I, C,S	Inspect	En, SBn,WFc		CF	KNWR	SRS,STF,M
48	K-27	Chief Cove	57 42.4	153 54.8	S, O	Co, P, CH, H++			I, C, S	Monitor	En, SBn,WFc		CF	KNWR	SRS,STF
49		Cape Kuliuk	57 48.4	153 58.3	SL,O	P, H++	B		I		En		CF	KNWR	ERS
50		Cape Ugat	57 51.6	153 52.7	SL,O,S	S++, CH, Co+, P++, SH, H++			S		WFc		CF	KNWR	ERS,M,GB
51	K-28	Campbell Lagoon	57 51.5	153 36.5	S, O	Co, P, CH, H++	B		I, C, S	Inspect	En,WFc		CF	KNWR	M,STF,GB,ETF
52	K-29	Lower Uganik Bay/Village Island	57 46.9	153 42.3	O	S++, Co++, P++, CH, SH, DV, H++	B		I, C, S	Monitor	En, SBn,WFc	SF+	CF	KNWR	M,STF,SRS
,53	K-31	Uganik Passage-Bays	57 48.9	153 18.3	SL,O,S	Co,P, H++	B		I, C, S	Monitor	En, SBn,WFc		CF	KNWR	M,STF,SRS,GB
54	K-32	Terror Bay	57 46.5	153 11.8	SL,O	Co, P++, CH+, S, H++	B		I, C, S	Report	En, SBn,WFc		CF	KNWR	M,STF,GB
55	K-33	Uganik East Passage	57 50.5	153 12.5	SL,O,S	P++, CH, H++	B		I, C, S	Monitor	En,WFc		CF	KNWR	SRS,M
56	K-34	Viekoda Bay	57 52.2	153 07.1	S, O	Co, P, CH, DV, H++			I, C, S	Inspect	En, SBn	SF+	CF	KNWR	SRS,STF,M,GB,EWP
57	K-30	Noisy Island	57 55.6	153 34.2	SL,O	P, H++			I, C, S	Inspect	En,WFc,Sbn		CF	KNWR	ERS,GB
58	K-35	Dry Spruce Bay	57 56.6	153 03.3	S, O	H++	B		I, C, S	Inspect	En, SBn,WFc	SF+	CF	St/Nat	SRS,ETF,GB
59		Ostrovka Point	57 56.9	152 58.1	S, O	P, H++	B		I, C,S		En, SBn,WFc	SF+	CF	Native	SRS,EWP
Southern Zone															
60		Narrow Cape	57 26.6	152 18.2	S, O	S					En, SBn		CF	SP	SRS
61		Ugak Island	57 22.9	152 16.6	S,SL						WFc		CF		SRS
62		Pasagshak Pt. To Narrow Cape	57 25.1	152 24.8	S						En, SBn		CF		SRS
63		Pasagshak Bay	57 26.5	152 29.3	S	S,H					En,WFc		CF	SP	SRS
64		Long Island/Shark Pt.	57 26.7	152 33.9	S	S					En, SBn		CF		SRS
65		West Ugak Bay	57 28.9	152 46.6	S, O	S,H					En, SBn		CF		SRS